

DETAILED ACTION

Drawings

The drawings were received on 31 August 2011. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22-25 all depend from canceled claims and are therefore indefinite in scope.

Claim 22 recites the limitation "the recesses" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21, 23, 25, 28, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kilby et al. (6,321,895).

In Re claim 21, Kilby et al. disclose a cable assembly including a plurality of cables (54) and a plurality of connector devices (74) for operatively connecting an end portion of each associated cable to form an endless cable, wherein: the connector devices are arranged in spaced apart relation along the length of the endless cable (see fig. 6); each connector device includes a power transmission member (102) and a coupling (adjacent 78) operatively connecting the end portion of the associated cable to the power transmission member; and wherein the power transmission member is a generally tubular member and circular in cross-section generally having end sections including rotatable bushes (bearings 106). Examiner notes that the claims are directed to a cable assembly, and therefore the limitations regarding the wheel have not been given weight.

In Re claims 23, 25, and 28, see body (74), plates (26) and clevis connection (adjacent 26) (fig. 8).

In Re claim 30, there appear to be retaining rings on the power transmission member (pin 102) (see fig. 8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilby et al. (6,321,895) as applied to claim 25 above, and further in view of Ambs et al. (6,415,908).

In Re claim 26, Kilby et al. disclose attaching the cable to the coupling element, but does not specifically teach swaging.

Ambs et al. teach securing the end of a cable using swaging. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used swaging, as taught by Ambs et al., as it was a well-known means for securing the cable to the coupling member, to provide a cost effective robust means of connection.

In Re claim 27, see pins (not labeled, through 78) connecting the cable (fig. 8).

Claims 21, 23, 25, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdy (844,288) in view of Tanaka (5,908,364).

In Re claim 21, Purdy discloses a cable assembly including a plurality of cables (A) and a plurality of connector devices (B,B') for operatively connecting an end portion of each associated cable to form an endless cable, wherein: the connector devices are arranged in spaced apart relation along the length of the endless cable (see fig. 1); each connector device includes a power transmission member (R) and a coupling (b,b') operatively connecting the end portion of the associated cable to the power transmission member; and wherein the power transmission member is a generally tubular member and circular in cross-section generally having end sections. Examiner

notes that the claims are directed to a cable assembly, and therefore the limitations regarding the wheel have not been given weight. Purdy fails to teach rotatable bushings on the transmission member.

Tanaka teaches including on a drive chain, a rotatable bushing member (5) between the connecting members (3) and the transmission members (4) so that the connecting members can rotate freely about the transmission member. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the cable assembly of Purdy to include bushing members between the power transmission members and the couplings, as taught by Tanaka, simply to enable them to rotate with reduced friction.

In Re claim 23, as understood, the coupling is arranged so that the load applied to the power transmission member by the cable is in the region of the central axis of the power transmission member (see fig. 1).

In Re claim 25, the coupling element of the coupling (b,b') includes a clevis (e') secured to the outer circumferential surface of the power transmission member (R) and two tongues (e) on the ends of the opposing cable which are operatively connected to the clevis of the opposing cable through the transmission member. Examiner notes that the clevises are also connected to the beginning of each cable.

In Re claim 28, the coupling element of the coupling includes a plate (b) mounted to said power transmission member for at least partial rotation relative thereto, said plate including one or more tongue portions (e) and said coupling further including at least one clevis (e') associated with a respective tongue portion said clevis being

operatively connected to an end of a cable, the tongue being operatively connected to the clevis through the power transmission member. Examiner notes that the plates are also connected to the beginning of each cable.

In Re claim 30, see pins (P) having retaining rings (adjacent r) which limit lateral movement of the plates.

Claims 22, 24, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdy (844,288) in view of Tanaka (5,908,364) as applied to claim 21, and further in view of Casgrain (538,895).

In Re claim 22, Purdy, as modified, teach a wheel, but fails to teach the specifics of the wheel.

Casgrain teaches using a wheel in the form of a sheave (A) with recesses (A^2), grooves (15), and teeth (A') for driving a power transmission band (a). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a wheel with recesses, grooves, and teeth, as taught by Casgrain, with the cable assembly of Purdy, to positively engage the transmission members and drive the cable assembly.

In Re claim 24, as understood, the coupling is arranged so that the load applied to the power transmission member by the cable is in the region of the central axis of the power transmission member (see fig. 1 of Purdy).

In Re claim 29, the coupling element of the coupling includes a plate (b) mounted to said power transmission member for at least partial rotation relative thereto, said

plate including one or more tongue portions (e) and said coupling further including at least one clevis (e') associated with a respective tongue portion said clevis being operatively connected to an end of a cable, the tongue being operatively connected to the clevis through the power transmission member. Examiner notes that the plates are also connected to the beginning of each cable.

In Re claim 31, see pins (P) having retaining rings (adjacent r) which limit lateral movement of the plates.

Claim 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdy (844,288) in view of Tanaka (5,908,364) as applied to claim 25 above, and further in view of Ambs et al. (6,415,908).

In Re claim 26, Purdy, as modified, disclose attaching the cable to the coupling element, but does not specifically teach swaging.

Ambs et al. teach securing the end of a cable using swaging. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used swaging, as taught by Ambs et al., as it was a well-known means for securing the cable to the coupling member, to provide a cost effective robust means of connection.

In Re claim 27, see pins (P) of Purdy connected between the tongue and clevis.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 31 August 2011 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

In this case, the motivation is found in the references themselves and the knowledge generally available to one of ordinary skill in the art. Tanaka teaches including on a drive chain, a rotatable bushing member (5) between the connecting members (links 3) and the transmission members (pins 4). These rotatable bushes are provided so that the links can rotate freely about the pins. The examiner continues to assert that it would have been obvious to have included bushing members between the power transmission members and the couplings, simply to enable them to rotate with reduced friction.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS IRVIN whose telephone number is (571)270-3095. The examiner can normally be reached on M-F 10-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley T King/
Primary Examiner, Art Unit 3657

/Thomas Irvin/
Examiner, Art Unit 3657